

ABSTRACT

An electrical machine comprises a stator and a rotor. The rotor includes a plurality of stator teeth and a winding with compact coils disposed on the teeth. The winding has (m) phases and (p) poles; where (m) is an integer and is greater than or equal to two; where (p) is an integer, is greater than or equal to two, and is an even number. The rotor has a magnetization pattern including a magnetization skew. In some constructions, each stator includes one or more channels along a surface adjacent to the rotor. The channels can be of various shapes including a trapezoidal shape or a curvilinear shape.

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